



# MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

**SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES**  
**DEPARTMENT OF AGRICULTURAL SCIENCES**  
**FOURTH YEAR SECOND SEMESTER EXAMINATION FOR**  
**BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)**  
**AEE 412: TECHNICAL REPORTING AND WRITING**

**DATE:**

**TIME:**

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**INSTRUCTIONS: Answer question ONE and any other TWO questions**

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Explain five main characteristics of technical writing (5 marks)
- b) Explain ten key ideas that should be considered under techniques of technical reporting and writing (10 marks)
- c) Explain five guiding principles of a project evaluation report (5 marks)
- d) Explain five ways in which project management techniques contribute to the success of project completion (5 marks)
- e) Describe five types of plagiarism that may be encountered in technical reporting and writing (5 marks)

**QUESTION TWO (20 MARKS)**

- a) Explain five essential qualities of technical writing that sets it apart from other types of writings (5 marks)
- b) Discuss five legal concerns that should be considered in projects and technical writing (5 marks)
- c) Explain five types of ethical issues that should be considered in research design and reporting (5 marks)
- d) Explain five functions of illustrations in technical reporting and writing (5 marks)

### QUESTION THREE (20 MARKS)

Assume that a county in Kenya where you work has acquired funds from a donor for an agricultural extension project. The project is composed of the following activities A, B, C, D, E, F, G and H and the activities precedence relationships are shown below.

Task	Predecessor	Optimistic (O) (weeks)	Most Likely (M) (weeks)	Pessimistic (P) (weeks)
A	-	7	9	11
B	A	1	2	3
C	A	7	8	9
D	B	2	5	11
E	C	4	5	6
F	C	1	4	8
G	F	2	6	9
H	D,E	6	7	8

Using the Programme Evaluation and Review Technique (PERT) as applied in project management:

- a) Develop a network diagram for this project (11 marks)
- b) From the network diagram identify:
  - i. The various project paths and their durations (3 marks)
  - ii. The project critical path (1 mark)
- c) Estimate the expected project completion time (1 mark)
- d) Determine the project time standard deviation and state its implication (4 marks)

### QUESTION FOUR (20 MARKS)

- a) Explain six basic properties of good technical reporting and writing (6 marks)
- b) Explain:
  - i. The term project evaluation (2 marks)
  - ii. Seven reasons for undertaking project evaluation (7 marks)
- c) Explain five limitations of using Critical Path Method (CPM) in project management (5 marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain:
- i. The term literature review (2 marks)
  - ii. Five reasons for conducting literature review (5 marks)
- b) Describe the six preliminary steps that are taken in the development of a proposal meant for attracting donor grants/funds (6 marks)
- c) Explain seven purposes of undertaking monitoring in project management (7 marks)